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|   |   |         |           |                |         |                     | <u> </u>         |  |
|---|---|---------|-----------|----------------|---------|---------------------|------------------|--|
| A | PPLICATION NO.  | FII     | LING DATE | FIRST NAMED IN | IVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |  |
|   | 10/698,286 10/31/2003   |         | 0/31/2003 | Edmund J. Ring |         | 58780US002          | 1619             |  |
|   | 32692 7590 11/16/2006<br>3M INNOVATIVE PROPERTIES COMPANY<br>PO BOX 33427 |         |           |                |         | EXAMINER            |                  |  |
|   |   |         |           |                |         | FASTOVSKY, LEONID M |                  |  |
|   |   |         |           |                |         |                     |                  |  |
|   | ST. PAUL,   | MN 5513 | 3-3427    |                |         | ART UNIT            | PAPER NUMBER     |  |
|   | ŕ   |         |           | •              |         | . 3742              |                  |  |
|   |   |         |           |                |         |                     |                  |  |

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|  | Application No.   | Applicant(s)                   |  |  |  |  |  |  |  |
|--|---|--------------------------------|--|--|--|--|--|--|--|
|  | 10/698,286  | RING, EDMUND J.                |  |  |  |  |  |  |  |
| Office Action Summary  | Examiner  | Art Unit                       |  |  |  |  |  |  |  |
|  | Leonid M. Fastovsky   | 3742                           |  |  |  |  |  |  |  |
| The MAILING DATE of this communication app<br>Period for Reply   | ears on the cover sheet with the c  | orrespondence address          |  |  |  |  |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). |   |                                |  |  |  |  |  |  |  |
| Status ·   | •   |                                |  |  |  |  |  |  |  |
| 1) Responsive to communication(s) filed on 14 Se   | Responsive to communication(s) filed on <u>14 September 2006</u> .  |                                |  |  |  |  |  |  |  |
|  |   |                                |  |  |  |  |  |  |  |
| 3) Since this application is in condition for allowan  | Since this application is in condition for allowance except for formal matters, prosecution as to the merits is |                                |  |  |  |  |  |  |  |
| closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  |   |                                |  |  |  |  |  |  |  |
| Disposition of Claims  |   |                                |  |  |  |  |  |  |  |
| 4)⊠ Claim(s) <u>1-28</u> is/are pending in the application.  |   |                                |  |  |  |  |  |  |  |
| 4a) Of the above claim(s) <u>2.5-12,14-18 and 22-</u>  | 27 is/are withdrawn from conside  | eration                        |  |  |  |  |  |  |  |
| 5) Claim(s) is/are allowed.  | Er istate withdrawn from conside  | ration.                        |  |  |  |  |  |  |  |
| 6) Claim(s) <u>1,3,4,13,19-21 and 28</u> is/are rejected.  |   |                                |  |  |  |  |  |  |  |
| 7) Claim(s) is/are objected to.  |   |                                |  |  |  |  |  |  |  |
| 8) Claim(s) are subject to restriction and/or  | alastian requirement  |                                |  |  |  |  |  |  |  |
|  | election requirement.   |                                |  |  |  |  |  |  |  |
| Application Papers   |   |                                |  |  |  |  |  |  |  |
| 9) The specification is objected to by the Examiner  | <b>.</b>  |                                |  |  |  |  |  |  |  |
| 10)⊠ The drawing(s) filed on 31 October 2006 is/are:   | a)⊠ accepted or b)☐ objected  | to by the Examiner.            |  |  |  |  |  |  |  |
| Applicant may not request that any objection to the o  | lrawing(s) be held in abeyance. See   | 37 CFR 1.85(a).                |  |  |  |  |  |  |  |
| Replacement drawing sheet(s) including the correcti  | on is required if the drawing(s) is obj   | ected to. See 37 CFR 1.121(d). |  |  |  |  |  |  |  |
| 11) The oath or declaration is objected to by the Ex   | aminer. Note the attached Office  | Action or form PTO-152.        |  |  |  |  |  |  |  |
| Priority under 35 U.S.C. § 119   |   |                                |  |  |  |  |  |  |  |
| a)⊠ All b) Some * c) None of:  | , ,_ ,_   |                                |  |  |  |  |  |  |  |
| 1. Certified copies of the priority documents  |   |                                |  |  |  |  |  |  |  |
| • • • •  | 2. Certified copies of the priority documents have been received in Application No                              |                                |  |  |  |  |  |  |  |
|  | 3. Copies of the certified copies of the priority documents have been received in this National Stage           |                                |  |  |  |  |  |  |  |
|  | application from the International Bureau (PCT Rule 17.2(a)).   |                                |  |  |  |  |  |  |  |
| * See the attached detailed Office action for a list of the certified copies not received.   |   |                                |  |  |  |  |  |  |  |
|  |   |                                |  |  |  |  |  |  |  |
| Attachment(s)  | •   |                                |  |  |  |  |  |  |  |
| 1) Notice of References Cited (PTO-892)  | 4) Interview Summary  | (PTO-413)                      |  |  |  |  |  |  |  |
| 2) Dotice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Da   | ite                            |  |  |  |  |  |  |  |
| Information Disclosure Statement(s) (PTO/SB/08)     Paper No(s)/Mail Date  | 5) Notice of Informal Page 6) Other:  | atent Application              |  |  |  |  |  |  |  |
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## **DETAILED ACTION**

## Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 1, 3-4, 13 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamp in view of Ito et al (5,379,021).

Kamp discloses an inductive heating device comprising a power supply 1 including a work head 4, inductive coils 5,7 configured to couple the power supply 1 to the work head, an inductive coupling assembly including a cable assembly 11, a primary coil 24, a secondary coil 13 and an inductive core 12, the power supply 1 being electrically coupled to the primary coil 13, the second coil being electrically coupled to the work head 4, the primary and secondary coils configured to be magnetically coupled through the inductor core 12 when the inductive coils 5, 7 are coupled. Also, the inductor core 12 is attached within and extends from the primary coil 24 and attaches within and extends from the secondary coil 13.

However, Kamp does not disclose a coupling sleeve and the inductive coupling removably coupling the coils.

Ito discloses a removable inductive coupler comprising a primary coil 6, secondary coils 5 with secondary cores 3 and 4, and an inductive coupling sleeve 2 (col. 3, lines 60-68, col. 4, lines 1-48 and Fig. 1-6).

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It would have been obvious to Ito discloses a removable inductive coupler comprising a primary coil 6, secondary coils one having ordinary skill in the art to modify Kamp's invention to include a removable coupler and a sleeve as taught by Ito in order to reduce production costs by allowing easy disassembly of primary and secondary circuits and further to include a protective sleeve as taught by Ito as reasonably pertinent to the particular problem of facilitating the assembly and disassembly of the inductive heating device in accordance with MPEP 2141.01(a).

As for claim 13, it would have be obvious to use the teaching of Kamp in view of Ito to use a method of heating a target substrate because they disclose all elements of the invention and capable of so perform

3. Claim 28 is rejected under 35 U.S.C. 103(a) over Kamp et al in view of Ito. Kamp discloses an inductive heating device comprising a power supply 1 including a primary coil 24, a cable assembly 11 having a first end coupled to the second coil 13 and a second end coupled to a work head 4, an inductor core 12, and means 5, 7 for coupling the cable assembly 11 to the power supply such that the inductor core 12 couples between the primary coil 24 and the secondary coil 13.

However, Kamp does not disclose the inductive coupling removably coupling the coils. Ito discloses a removable inductive coupler comprising a primary coil 6, secondary coils 5 with secondary cores 3 and 4 (col. 3, lines 60-68, col. 4, lines 1-48 and Fig. 1-6). It would have been obvious to one having ordinary skill in the art to modify Kamp's invention to include to include a removable coupler as taught by Ito in order to reduce production costs by allowing easy disassembly of primary and secondary circuits.

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## Response to Arguments

4. Applicant's arguments with respect to claims 1, 3-4,13,19-21 and 28 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid M Fastovsky whose telephone number is 571-272-4778. The examiner can normally be reached on M-Th. 8.00 am -6.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leonid M Fastovsky

Examiner Art Unit 3742

**Imf** 

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SUPERVISORY PATENT EXAMINER

11/13/06